

Mechanical Senior Curriculum Planning Sheet

Year 20____ / 20____

School of Mechanical, Industrial, and Manufacturing Engineering

*Offerings may change – consult on-line schedule of classes

Required Senior Courses		Pre or Co-requisites	cr	F	W	S
ME 451	Intro. to Instr. & Measurement Sys.	ME 311, 316, 317, 373, ST 314, ENGR 202	4	X		X
ME 430	Systems Dynamics & Control	ME 317	4	X	X	
ME 418	Senior Design Project	ME/E 312, 332 (c), E 322, ME 317, 383, 451 (c), WR 327, E 390	4	X		
ME 419	Senior Design Project	ME 418	4		X	

Lab Electives – Choose 1 course (4 credits)

F W S

ME 414	Mechatronics	ME 373, 430	4			X
ME 452	Thermal Fluids Lab	ME 451	4		X	
ME 453	Structure and Mechanics Lab	ME 451	4		X	
ME 454	Dynamic Mechanical Systems Lab	ME 451	4		X	
ME 455	Experimental Techniques in Materials Science	ENGR 321 or ME 570 (or instructor approval)	4			X

Analysis Electives –

F W S

ME 420	Applied Stress Analysis	ME 316	4	X		
ME 422	Mechanical Vibrations	ME 317	4		X	
ME 523	Advanced Stress Analysis	ME 520	4		X	
ME 424	Finite Element Modeling of Mech. Sys.	ME 420	3			X
ME 442	Thermal Management in Electronic Sys.	ME 332	4			*
ME 445	Introduction to Combustion	ME 312, 332	3			*
ME 450	Heat Transfer in Manufacturing	ME 312, 332	3	X		
ME 460	Intermediate Fluid Mechanics	ME 331	4	X		
ME 461	Gas Dynamics	ENGR 312, ENGR 331 (or ME 331)			X	
ME 567	Intro to Comp Fluid Dynamics	ME 312, 331	4		X	
ME 477	Solidification		3			*
ME 478	Thin Film Materials	ME 311, ENGR 321, 322	3			*
ME 479	Amorphous Materials	ME 311, ENGR 321, 322	3			*
ME 581	Thermodynamics of Solids	ENGR 321	4	X		
ME 582	Rate Processes in Materials	ME 581	3		X	
ME 484	Fracture of Materials	ENGR 322	3			X
ME 511	CAD/CAM III Advanced Engineering	Undergraduate or Graduate Standing	3		X	

Design Electives

F W S

ME 512	Kinematic Design of Linkages	ME 317	4		X	
ME 413	Computer-Aided Design	ME 383	4	X		
ME 414	Mechatronics	ME 373, 430	4			X
ME 424	Finite Element Modeling of Mech. Sys.	ME 420	3			X
ME 442	Thermal Management in Electronic Sys.	ME or ENGR 332	4			*
ME 444	Advanced Power Generation Sys.	ME or ENGR 312, 332, 373, ENGR 390	4	X		
ME 480	Material Selection	ENGR 322	3		X	
ME 483	Composite Materials	ENGR 322	3			*
ME 511	CAD/CAM III	Undergraduate or Graduate Standing	3		X	
ME 518	Concurrent Design of Products		3			*
IE 436	Lean Manufacturing Sys. Engineering		4	X		

8/4/09 ME * At least one design and one analysis course + additional * design or analysis course to equal 11 cr or more total .